(b) peptides which are derived from tumor antigens which are expressed by said patient's cells and are present at a higher concentration on said tumor cells of said vaccine than on said patient's cells;

and wherein said tumor cells have been charged with one or more said peptides (a) or (b) or both (a) and (b) in such a way that said tumor cells are recognized as foreign by the immune system of said patient and trigger a cellular immune response in said patient.

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37. The tumor vaccine of claim 36, wherein said tumor cells are autologous tumor cells.

38. The tumor vaccine of claim 36, wherein said tumor cells are allogenic tumor cells.

39. The tumor vaccine of claim 38, wherein said allogenic tumor cells are cells of one or more cell lines, of which at least one cell line expresses at least one tumor antigen which is identical to a tumor antigen expressed by said patient.

40. The tumor vaccine of claim 38, wherein said allogenic tumor cells are cells of one or more cell lines, of which at least one cell line expresses several tumor antigens which are identical to tumor antigens expressed by said patient.

41. The tumor vaccine of claim 36, wherein said tumor cells comprise both autologous and allogenic tumor cells.

42. The tumor vaccine of claim 36, wherein said peptide (a) is derived from a naturally occurring immunogenic protein or a cellular breakdown product thereof.

43. The tumor vaccine of claim 42, wherein said naturally occurring immunogenic protein or cellular breakdown product thereof is derived from a viral protein.

44. The tumor vaccine of claim 43, wherein said viral protein is an influenza virus protein.

1 CONT.

45. The tumor vaccine of claim 42, wherein said naturally occurring immunogenic protein or cellular breakdown product thereof is derived from a bacterial protein.

46. The tumor vaccine of claim 36, wherein said peptide (a) is derived from a tumor antigen foreign to said patient.

47. The tumor vaccine of claim 36, wherein said peptide (a) is a synthetic peptide.

48. The tumor vaccine of claim 36, wherein said tumor cells have been charged with a number of different peptides.

49. The tumor vaccine of claim 48, wherein said peptides differ in that they bind to different HLA-subtypes.

50. The tumor vaccine of claim 48, wherein said peptides differ from one another in one or more amino acid residues which are not crucial to HLA-binding.

51. The tumor vaccine of claim 36, wherein said vaccine further comprises cells selected from the group consisting of:

(a) tumor cells which are transfected with one or more cytokine genes;

(b) fibroblasts which are transfected with one or more cytokine genes; and

(c) both tumor cells and fibroblasts which are transfected with one or more cytokine genes.

52. The tumor vaccine of claim 51, wherein said cytokine genes comprise the gene for IL-2 or the gene for IFN-γ.

53. The tumor vaccine of claim 36, wherein said vaccine further comprises fibroblasts which have been charged with one or more of a third set of peptides derived from tumor antigens expressed by said patient, wherein said third set of peptides bind to an MHC-I or MHC-II molecule.

54. The tumor vaccine of claim 36, wherein said vaccine further comprises dendritic cells which have been charged with one or more of a third set of peptides derived from tumor antigens expressed by said patient, wherein said third set of peptides bind to an MHC-I or MHC-II molecule.

55. A process for preparing a tumor vaccine for administration to a patient, comprising incubating tumor cells with one or more of a first set of peptides in the presence of an organic polycation, for such a time and in such a quantity that said first set of peptides are bound to said tumor cells in such a way that said first set of peptides are recognized as foreign by said patient's immune system in context with said tumor cells and trigger a cellular immune response; wherein said tumor cells present a second set of peptides derived from tumor antigens in an HLA context, and wherein at least some of said tumor cells have at least one MHC-I

haplotype of said patient on the cell surface, and wherein said first set of peptides act as ligands for said MHC-I haplotype, and wherein said first set of peptides are selected from the group consisting of:

(a) peptides which are different from peptides which are derived from proteins expressed by the cells of said patient; and

(b) peptides which are derived from tumor antigens which are expressed by the patient.

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56. The process of claim 55, wherein said process further comprises:

(a) treating dendritic cells, in the presence of an organic polycation, with one or more of a third set of peptides derived from tumor antigens expressed by said patient; wherein said tumor antigens bind to an MHC-I or MHC-II molecule; and

(b) mixing said dendritic cells with said tumor cells.

57. The process of claim 55, wherein said polycation is polylysine.

58. The process of claim 57, wherein said polylysine has a chain length of about 30 to about 300 lysine groups.

59. The process of claim 55, wherein said polycation is at least partially conjugated with another molecule.

60. The process of claim 59, wherein said molecule is transferrin.

61. The process of claim 55, wherein said process further comprises incubating said tumor cells with DNA.

62. The process of claim 61, wherein said DNA is a plasmid.

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63. The process of claim 61, wherein the ratio of DNA to polycation is about 1:2 to about 1:5.

64. The process of claim 61, wherein said tumor cells are melanoma cells.

65. The process of claim 55, wherein said peptide (a) or (b) is used in an amount of about 50 μg to about 160 μg per 1 X 10^5 to 2 X 10^7 cells.

66. A process for preparing a tumor vaccine for administration to a patient, comprising incubating fibroblasts with one or more peptides in the presence of an organic polycation, for such a time and in such a quantity that said peptides are bound to said fibroblasts in such a way that said peptides are recognized as foreign by said patient's immune system in context with said fibroblasts and trigger a cellular immune response; wherein said peptides are derived from tumor antigens which are expressed by said patient.

67. A process for preparing a tumor vaccine for administration to a patient, comprising incubating dendritic cells with one or more peptides in the presence of an organic polycation, for such a time and in such a quantity that said peptides are bound to said dendritic cells in such a way that said peptides are recognized as foreign by said patient's immune system in context with said dendritic cells and trigger a cellular immune response; wherein said peptides